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EXAMINER

HEALD, ROBYN SUE

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1733

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Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No. 10/725,536	Applicant(s) ANDERSSON ET AL.	
	Examiner Robyn S. Heald	Art Unit 1733	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 03 December 2003.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 03 December 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>12/03/03, 06/15/05</u> . | 6) <input checked="" type="checkbox"/> Other: <u>web translation for FR2824778</u> .    |

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 112***

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 2-5 recite the limitation "the printed pattern" in the fourth line of both claims 2 and 4. There is insufficient antecedent basis for this limitation in the claim. It is unclear if "the printed pattern" is referring to the colored printed pattern in claim 1, or if it is a different printed pattern. Appropriate corrections are required, if necessary.
3. Claim 8 recites the limitation "the next web" in the second line and "a colored glue pattern" and "the underlying web" in the fourth line. There is insufficient antecedent basis for these limitations in the claim. It appears that "the next web" is referring to the second web and "the underlying web" is referring to the first web of claim 1. Since the pattern has already been established in a claim 7, "a colored glue pattern" should be changed to "the colored glue pattern." Appropriate corrections are necessary.
4. Claim 10 recites the limitation "the two printing patterns." There is insufficient antecedent basis for this limitation in the claim. Claim 10 refers back to claim 6, where "at least one" first pattern is printed on the first web and "at least one" second pattern is printed on the second web. This does not limit the invention to one first pattern on the first web and one second pattern on the second web, creating two printed patterns total. Therefore, claim 10 cannot have the limitation "the two printing patterns," because claim 6 is not limited to only two patterns. Appropriate corrections are necessary.

***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-4, 6-7, 9, and 11-17 are rejected under 35 U.S.C. 102(e) as being anticipated by Andersson et al. (U.S. Patent Application Publication No. 2003/0198788 A1).

The applied reference has a common inventor with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention “by another,” or by an appropriate showing under 37 CFR 1.131.

With respect to claim 1, Andersson et al. discloses a method for producing a multi-ply web of flexible material (paragraph 0009, line 2), at a plurality of glue sites (paragraph 0010, lines 6-7), comprising: by gluing the plies bringing a patterned glue transfer roll, having a pattern of protuberances, in contact with a glue application device; transferring glue to a first web in a glue pattern corresponding to the configuration of the

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protuberances (figure 1, paragraph 0010, and paragraph 0037); bringing a second web in contact with the glue applied side of said first web in a press nip between a patterned lamination roll and an impression roll (figure 1, paragraph 0011, and paragraph 0039, lines 1-6); said lamination roll having a pattern of protuberances corresponding to said glue pattern (paragraph 0014, and paragraph 0039, lines 1-6); the glue transfer roll and the lamination roll being in register with each other (paragraph 0011, lines 11-12), wherein the first web and/or the second web is printed by a printing roll carrying a colorant in a selected pattern (figure 1, paragraph 010, paragraph 0015, and paragraph 0058); and said printing is performed in register with the glue transfer while residing on said impression roll (figure 1).

Regarding claim 2, the first web is printed before it is laminated to the second web, with the pattern is printed on the inner side facing the second web (figure 1, paragraph 0015, paragraphs 0037).

Regarding claim 3, two or more patterns are printed in subsequent steps on the first web before it is laminated to the second web, and said patterns are printed in register with each other and with the glue pattern (figure 1, paragraph 0015, paragraphs 0037-0038).

Regarding claim 4, the second web is printed after or simultaneously with the lamination, with the pattern printed on the outside of the second web (figure 1, paragraph 0058).

Regarding claim 6, at least two printing stations are provided, one printing station prints at least one first pattern on the first web before lamination, and at least one

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second printing station prints at least one second pattern on the second web (figure 1, paragraph 0015, paragraph 0026, lines 9-12, paragraphs 0037-0038, paragraph 0058)

Regarding claim 7, the glue that is used is colored glue (paragraph 0015).

Regarding claim 9, different colors may be used for gluing and printing (paragraph 0050, line 8).

Regarding claim 11, the colored glue pattern and the printing pattern are different (figure 1, paragraph 0058).

Regarding claim 12, the size of each glue site amounts to between 0.15 and 150 mm<sup>2</sup> (paragraph 0021).

Regarding claim 13, the number of glue sites per unit area amounts to between 25 per m<sup>2</sup> to 150 per cm<sup>2</sup> (paragraph 0044).

Regarding claim 14, the glue is applied to the first ply in glue sites covering an area corresponding to between 0.03 and 9% of the total area (paragraph 0023).

Regarding claim 15, at least one of the plies is exerted to a three dimensional patterning provided on the ply while wet, during drying of wet ply and/or in dry state (paragraph 0017, paragraph 0059).

Regarding claim 16, the multi-ply web may be embossed after lamination (paragraph 0063).

Regarding claim 17, any of said web comprises one or more plies of flexible material (paragraph 0057).

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3. Claims 1, 2, 4, 6-7, 9, 10, and 12-17 are rejected under 35 U.S.C. 102(e) as being anticipated by Mansson et al. (U.S. Patent Application Publication No. 2004/0062916 A1).

The applied reference has a common inventor with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131.

With respect to claim 1, Andersson et al. discloses a method for producing a multi-ply web of flexible material, at a plurality of glue sites (paragraph 0002, paragraph 0013), comprising: by gluing the plies bringing a patterned glue transfer roll, having a pattern of protuberances, in contact with a glue application device; transferring glue to a first web in a glue pattern corresponding to the configuration of the protuberances (figure 1, paragraph 0015, and paragraph 0038); bringing a second web in contact with the glue applied side of said first web in a press nip between a patterned lamination roll and an impression roll (figure 1, paragraph 0015, and paragraph 0039, lines 1-5); said lamination roll having a pattern of protuberances corresponding to said glue pattern (paragraph 0015, and paragraph 0039, lines 1-5); the glue transfer roll and the lamination roll being in register with each other (paragraph 0015, lines 24-26), wherein the first web and/or the second web is printed by a printing roll carrying a colorant in a selected pattern (figure 1, paragraph 015, paragraphs 0051, and paragraph 0038-0039);

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and said printing is performed in register with the glue transfer while residing on said impression roll (figure 1, paragraph 0040).

Regarding claim 2, the first web is printed before it is laminated to the second web, with the pattern is printed on the inner side facing the second web (figure 1, paragraph 0015, paragraphs 0038).

Regarding claim 4, the second web is printed after or simultaneously with the lamination, with the pattern printed on the outside of the second web (figure 1, paragraph 0051, paragraph 0042).

Regarding claim 6, at least two printing stations are provided, one printing station prints at least one first pattern on the first web before lamination, and at least one second printing station prints at least one second pattern on the second web (figure 1, paragraph 0051, paragraph 0038-0039, paragraphs 0042)

Regarding claim 7, the glue that is used is colored glue (paragraph 0051).

Regarding claim 9, different colors may be used for gluing and printing (paragraph 0025).

Regarding claim 10, the two printing patterns are different (paragraph 0042, paragraph 0051).

Regarding claim 12, the size of each glue site amounts to between 0.15 and 150 mm<sup>2</sup> (paragraph 0020).

Regarding claim 13, the number of glue sites per unit area amounts to between 25 per m<sup>2</sup> to 150 per cm<sup>2</sup> (paragraph 0020).



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Regarding claim 14, the glue is applied to the first ply in glue sites covering an area corresponding to between 0.03 and 9% of the total area (paragraph 0048).

Regarding claim 15, at least one of the plies is exerted to a three dimensional patterning provided on the ply while wet, during drying of wet ply and/or in dry state (paragraph 0019, paragraph 0058).

Regarding claim 16, the multi-ply web may be embossed after lamination (paragraph 0028, paragraph 0058).

Regarding claim 17, any of said web comprises one or more plies of flexible material (paragraph 0018).

### ***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1, 2, 6, 12, 13, 15, and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ruppel et al. (U.S. Patent 5,339,730) in view of Schulz (U.S. Patent 6,361,601).

With respect to claim 1, Ruppel et al. discloses a method for producing a multi-ply web of flexible material 15, comprising: by gluing the plies bringing a glue transfer roll in contact with a glue application device 5; transferring glue to a first web 1 in a glue pattern corresponding to the configuration of the protuberances of lamination roll 4;

bringing a second web 7 in contact with the glue applied side of said first web 1 in a press nip between a patterned lamination roll 4 and an impression roll 12; the glue transfer roll and the lamination roll 4 being in register with each other, wherein the first web 1 and/or the second web 7 is printed in a selected pattern by a printing roll 13 and 14 carrying a colorant; and said printing is performed in register with the glue transfer while residing on said impression roll 12 (figure 1, column 1, lines 5-7, 51-53 and line 56, thru column 2, line 8). What Ruppel et al. does not disclose is if the glue transfer roll can have a pattern of protuberances.

Schulz '601 discloses a similar method for producing a multi-ply web W by gluing the plies bringing a glue transfer roll 42, having a pattern of protuberances, in contact with a glue application device 44; transferring glue to a first web 10 in a glue pattern corresponding to the configuration of the protuberances; bringing a second web 1 in contact with the glue applied side of said first web 10 in a press nip between a patterned lamination roll 14 and an impression roll 4; said lamination roll 14 having a pattern of protuberances corresponding to said glue pattern; the glue transfer roll 42 and the lamination roll 14 being in register with each other (figure 3, column 3, lines 30-50, column 4, lines 17-19, column 6, line 52, thru column 7, line 30 and lines 50-55).

Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention to use a glue transfer roll having a pattern of protuberances, like that of Schulz '601, for the glue system of Ruppel et al., because such a glue transfer roll will allow for a selected amount of adhesive to be applied in a pattern for bonding the first web 1 and the second web 7 in discrete locations.

Regarding claim 2, Ruppel et al. in view of Schulz '601 discloses that a glue pattern is printed onto the first web 1 on its inner side using a patterned glue transfer roll before it is laminated to the second web 7 (figure 1, column 1, lines 60-62, of Ruppel et al.; figure 3, column 7, lines 15-25, of Schulz '601).

Regarding claim 6, Ruppel et al. discloses a glue transfer roll 5, having a pattern of protuberances in view of Schulz '601 (figure 3, column 7, lines 15-25, of Schulz '601), printing a first pattern on the first web 1 and two printing stations 13 and 14 printing a second pattern on the second web 7 (figure 1, column 1, lines 39-40 and line 67, thru column 7, line 2 and 50-54).

Regarding claim 12, because the glue transfer roll 5 can be of any configuration, as stated by Schulz '601 (column 7, lines 22-24), it would have been within perview of the skilled artisan to create a configuration so that the size of each glue site amounts to between 0.15 and 150 mm<sup>2</sup>.

Regarding claim 13, because the glue transfer roll 5 can be of any configuration, as stated by Schulz '601 (column 7, lines 22-24), it would have been within perview of the skilled artisan to create a configuration so that the number of glue sites per unit area amounts to between 25 per m<sup>2</sup> and 150 per cm<sup>2</sup>.

Regarding claim 15, Ruppel et al. discloses that both the first web 1 and the second web 7 are embossed before lamination (figure 1, column 1, lines 56-59 and 63-68).

Regarding claim 17, Ruppel et al. discloses that the multi-ply web may have two or more plies total (column 1, lines 5-7), and because it is well known in the art to add

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plies of material to a web to increase the strength of the web, it would have been within pervue of the skilled artisan to comprise a web having one or more plies of flexible material.

6. Claims 14 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ruppel et al. and Schulz '601 as applied to claim 1 above, and further in view of Murphy (U.S. Patent 3,684,641).

Regarding claim 14, because the glue transfer roll 5 can be of any configuration, as stated by Schulz '601 (column 7, lines 22-24), it would have been within pervue of the skilled artisan to create a configuration so that the glue sites cover an area corresponding to between 0.03 and 9% of the total area, as evidenced by the teachings of Murphy (disclosing a printing pattern covering an area of 3% of the total area; column 4, lines 70-73).

Regarding claim 16, Ruppel et al. discloses a first web 1 and a second web 7 being embossed before lamination (figure 1, column 1, line 56, thru column 2, line 5), but is silent as to whether the multi-ply web 15 can be embossed again after lamination.

Murphy discloses a similar method of producing a multi-ply web by printing a glue pattern onto a first web 5 and bringing the first web 5 in contact with a second web 6 into a press nip between rolls 11 and 12 for lamination figure 2, column 3, line 55, thru column 4, line 16). After lamination the web may be embossed between rolls 18 and 19 (column 4, lines 22-25).

Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention to emboss the web of Ruppel et al. after lamination, because

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such a step would intensify the three-dimensional effect of the web and create a more eye-pleasing pattern.

7. Claims 1, 2, 7, 12, 13, 15, 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schulz (U.S. Patent 4,376,671) in view of Nystrand (U.S. Patent 3,867,225).

With respect to claim 1, Schulz '671 discloses a method for producing a multi-ply web of flexible material 128, comprising: by gluing the plies bringing a glue transfer roll 123; transferring glue to a first web 121 in a glue pattern corresponding to the configuration of the protuberances of lamination roll 111; bringing a second web 122, also having a glue transfer roll 123a transferring glue in a pattern corresponding to the configuration of protuberances of impression roll 112, in contact with the glue applied side of said first web 121 in a press nip between a patterned lamination roll 111 and an impression roll 112; the glue transfer roll 123 and the lamination roll 111 being in register with each other (figure 4, column 3, lines 30-65). Schulz '671 is silent as to whether the glue transfer rolls 123 and 123a can have protuberances thereon and if the glue used may be colored glue.

Nystrand discloses a similar method of producing a multi-ply web by gluing the plies bringing a glue transfer roll 22, having a pattern of protuberances, in contact with a glue application device 44; transferring colored glue (column 2, lines 9-11) to a first web 15 in a glue pattern corresponding to the configuration of the protuberances; bringing a second web 23 in contact with the glue applied side of said first web 15 in a press nip 26 between a patterned lamination roll 12 and an impression roll 27; said lamination roll

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12 having a pattern of protuberances corresponding to said glue pattern; the glue transfer roll 22 and the lamination roll 12 being in register with each other (figure 1, column 1, line 62, thru column 2, line 6 and lines 22-30).

Therefore, it would have been obvious to use the glue system of Nystrand, having a patterned glue transfer roll 22 and colored glue, for the glue applications of Schulz '671, because using such a colored glue system will create a more ornamental motif that stands out from the background of the product.

Regarding claim 2, Schulz '671 in view of Nystrand discloses that a colored glue pattern is printed onto the first web 121 on its inner side using a patterned glue transfer roll 123 before it is laminated to the second web 122 (figure 4, column 3, lines 59-65, of Schulz '671; figure 1, column 1, line 62, thru column 2, line 6 and lines 9-11, of Nystrand).

Regarding claim 7, Nystrand teaches colored glue (column 2, lines 9-11).

Regarding claim 12, because Nystrand discloses that patterns are given considerable leeway as far as design of choice (column 3, lines 24-25), it would have been within pervuew of the skilled artisan to create a configuration so that the size of each glue site amounts to between 0.15 and 150 mm<sup>2</sup>.

Regarding claim 13, because Nystrand discloses that patterns are given considerable leeway as far as design of choice (column 3, lines 24-25), it would have been within pervuew of the skilled artisan to create a configuration so that the number of glue sites per unit area amounts to between 25 per m<sup>2</sup> and 150 per cm<sup>2</sup>.

Regarding claim 15, Schulz '671 discloses that both the first web 121 and the second web 122 are embossed before lamination (figure 4, column 3, lines 31-46).

Regarding claim 17, Schulz '671 discloses an embodiment of the invention with the multi-ply web comprising 3 plies of flexible material (figure 7, column 4, lines 53-54).

8. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Schulz '671 and Nystrand as applied to claim 1 above, and further in view of Yeo (U.S. Patent 5,503,076).

Regarding claim 3, Schulz '671 discloses a colored glue pattern printed on the inner side of the first web 121 before being laminated to the second web 122, but is silent as to whether more than one pattern can be printed on the web 121.

Yeo discloses a similar method of producing a multi-ply web by using colored glue for printing two non-overlapping patterns onto a web before bonding to another web (figures 1-3, column 3, lines 8-17, column 8, lines 14-25). He also states that the colored glue patterns may be provided on either or both of the web layers, like that of Schulz '671 (column 3, lines 32-37).

Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention to include a second glue printing station to provide a second colored glue pattern on the inner side of the first web 121 before lamination to the second web 122, because creating a second colored glue pattern on the first web 121 creates a more decorative design for the product and creates a stronger bond to the second web 122.

9. Claims 4, 5, 6, and 9-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schulz '671 and Nystrand as applied to claim 1 above, and further in view of Doubet (FR 2824778).

Regarding claim 4, Schulz '671, as modified, discloses printed colored glue patterns applied to the inside of a first web 121 and a second web 122 before lamination, but is silent as to whether printed ink patterns can be applied to the multi-ply web 128 after lamination.

Doubet discloses a similar method of producing a multi-ply web comprising gluing one web 46 in a colored glue pattern, corresponding to the pattern of protuberances of lamination roll 18, on the inside of the web 46, bringing web 46 in contact with another web 52 and laminating the two together. The web 46, where a glue pattern has been printed on the inner side, is also printed with ink patterns by two printing stations 12 and 14, while residing on an impression roll 16, after the web 46 has been laminated to web 52 (figure 1, abstract).

Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention to print an ink pattern on the outside of the second web 122 after lamination, because adding such a pattern would create a more decorative, eye-pleasing design on the product.

Regarding claim 5, Doubet discloses two patterns printed in register with each other in subsequent steps on the outside of web 46 (figure 1 and 2, abstract).

Regarding claim 6, Schulz '671, as modified, provides a colored glue printing station that prints a first pattern on the first web 121 before lamination and two colored



ink printing stations that print a second and third pattern on the second web 122 after lamination (figure 4, column 3, lines 52-65, of Schulz '671; figures 1 and 2, abstract/specification of Doubet).

Regarding claim 9, Doubet discloses that the colored glue pattern and colored ink patterns are of different colors (abstract/specification).

Regarding claim 10, Doubet discloses that the colored printed patterns, glue and ink, are of different forms (figure 2, abstract/specification).

Regarding claim 11, Doubet discloses that the colored glue pattern and the colored ink patterns are different (figure 2, abstract/specification).

10. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Schulz '671 and Nystrand as applied to claim 7 above, and further in view of McNeil et al. (U.S. Patent 6,113,723).

Regarding claim 8, Schulz '671 discloses a printed pattern on each of the first web 121 and the second web 122, but is silent as to whether these two patterns may be the same and printed on top of each other.

McNeil et al. discloses a similar method of producing a multi-ply web where an adhesive is printed onto each of two plies 12 in a predetermined pattern before lamination. The two applicator rolls 38 are in register with each other so that the patterns of both applicators 38 may be the same and printed on top of each other on the two webs 12 (figure 2, column 3, lines 60-61, column 4, lines 21-26).

Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention to have both patterned glue rolls 123 and 123a with the same

pattern in register with each other, so that the patterns on the two webs 121 and 122 lie on top of each other, because doing so would create a product with a stronger bond and a cleaner, more simple design, depending on the characteristics desired.

11. Claims 14 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schulz '671 and Nystrand as applied to claim 1 above, and further in view of Murphy.

Regarding claim 14, any pattern may be chosen for the webs of Schulz '671, depending on the characteristics desired for the product. It would have been within pervuew of the skilled artisan to create a configuration so that the glue sites cover an area corresponding to between 0.03 and 9% of the total area, as evidenced by the teachings of Murphy (disclosing a printing pattern covering an area of 3% of the total area; column 4, lines 70-73).

Regarding claim 16, Schulz '671 discloses a first web 121 and a second web 122 being embossed before lamination (figure 4, column 3, lines 30-65), but is silent as to whether the multi-ply web 15 can be embossed again after lamination.

Murphy discloses a similar method of producing a multi-ply web by printing a glue pattern onto a first web 5 and bringing the first web 5 in contact with a second web 6 into a press nip between rolls 11 and 12 for lamination figure 2, column 3, line 55, thru column 4, line 16). After lamination the web may be embossed between rolls 18 and 19 (column 4, lines 22-25).

Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention to emboss the web of Schulz '671 after lamination, because

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such a step would intensify the three-dimensional effect of the web and create a more eye-pleasing pattern.

12. Claims 1, 2, 7, 12, 13, 15, and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schulz '601 in view of Nystrand and Schulz '601.

Schulz '601 discloses a method for producing a multi-ply web W by bringing a glue transfer roll 42, having a pattern of protuberances, in contact with a glue application device 44; transferring glue to a first web 10 in a glue pattern corresponding to the configuration of the protuberances; bringing a second web 1 in contact with the glue applied side of said first web 10 in a press nip between a patterned lamination roll 14 and an impression roll 4; said lamination roll 14 having a pattern of protuberances corresponding to said glue pattern; the glue transfer roll 42 and the lamination roll 14 being in register with each other (figure 3, column 3, lines 30-50, column 4, lines 17-19, column 6, line 52, thru column 7, line 30 and lines 50-55). Schulz '601 is silent as to whether the glue may be colored. Schulz '601 discloses that the glue transfer roll 42 and glue application device 44 may otherwise be positioned to transfer a glue pattern onto the second web 1, but is silent to whether the glue can be applied to both the first web 10 and the second web 1.

Nystrand discloses a similar method of producing a multi-ply web by gluing the plies bringing a glue transfer roll 22, having a pattern of protuberances, in contact with a glue application device 44; transferring colored glue (column 2, lines 9-11) to a first web 15 in a glue pattern corresponding to the configuration of the protuberances; bringing a second web 23 in contact with the glue applied side of said first web 15 in a press nip

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26 between a patterned lamination roll 12 and an impression roll 27; said lamination roll 12 having a pattern of protuberances corresponding to said glue pattern; the glue transfer roll 22 and the lamination roll 12 being in register with each other (figure 1, column 1, line 62, thru column 2, line 6 and lines 22-30).

Schulz '671 discloses a method for producing a multi-ply web of flexible material 128, comprising: by gluing the plies bringing a glue transfer roll 123; transferring glue to a first web 121 in a glue pattern corresponding to the configuration of the protuberances of lamination roll 111; bringing a second web 122, also having a glue transfer roll 123a transferring glue in a pattern corresponding to the configuration of protuberances of impression roll 112, in contact with the glue applied side of said first web 121 in a press nip between a patterned lamination roll 111 and an impression roll 112; the glue transfer roll 123 and the lamination roll 111 being in register with each other (figure 4, column 3, lines 30-65).

Therefore, it would have been obvious to use the glue systems of Nystrand, using colored glue, and Schulz '671, having glue printing stations printing patterns onto both webs, for the glue applications of Schulz '671, because printing colored glue patterns onto both the first web 10 and the second web 1 will create a more ornamental motif that stands out from the background of the product.

Regarding claim 2, Schulz '601, as modified, discloses that a colored glue pattern is printed onto the first web 121 on its inner side using a patterned glue transfer roll 123 before it is laminated to the second web 122 (figure 3, column 7, lines 15-25, of

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Schulz '671; figure 1, column 1, line 62, thru column 2, line 6 and lines 9-11, of Nystrand).

Regarding claim 7, Nystrand teaches colored glue (column 2, lines 9-11).

Regarding claim 12, because Nystrand discloses that patterns are given considerable leeway as far as design of choice (column 3, lines 24-25), it would have been within pervue of the skilled artisan to create a configuration so that the size of each glue site amounts to between 0.15 and 150 mm<sup>2</sup>.

Regarding claim 13, because Nystrand discloses that patterns are given considerable leeway as far as design of choice (column 3, lines 24-25), it would have been within pervue of the skilled artisan to create a configuration so that the number of glue sites per unit area amounts to between 25 per m<sup>2</sup> and 150 per cm<sup>2</sup>.

Regarding claim 15, Schulz '601 discloses that both the first web 10 and the second web 1 are embossed before lamination (figure 3, column 6, line 52, thru column 7, line 11).

Regarding claim 17, Schulz '601 discloses two webs that are laminated together, but is silent as to whether any more plies can be introduced into the web. Schulz '671 discloses an embodiment of the invention with the multi-ply web comprising 3 plies of flexible material (figure 7, column 4, lines 53-54). Therefore it would have been obvious to one having ordinary skill in the art at the time of the invention to add another ply to the either the first web 10 or the second web 1, because doing so would increase the thickness and strength of the product.

13. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Schulz '601, Nystrand, and Schulz '671 as applied to claim 1 above, and further in view of Yeo.

Regarding claim 3, Schulz '601, as modified, discloses a colored glue pattern printed on the inner side of the first web 121 before being laminated to the second web 122, but is silent as to whether more than one pattern can be printed on the web 121.

Yeo discloses a similar method of producing a multi-ply web by using colored glue for printing two non-overlapping patterns onto a web before bonding to another web (figures 1-3, column 3, lines 8-17, column 8, lines 14-25). He also states that the colored glue patterns may be provided on either or both of the web layers, like that of Schulz '671 (column 3, lines 32-37).

Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention to include a second glue printing station to provide a second colored glue pattern on the inner side of the first web 10 before lamination to the second web 1, because creating a second colored glue pattern on the first web 10 creates a more decorative design for the product and a stronger bond to the second web 1.

14. Claims 4, 5, 6, and 9-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schulz '601, Nystrand, and Schulz '671 as applied to claim 1 above, and further in view of Doubet.

Regarding claim 4, Schulz '601, as modified, discloses printed colored glue patterns applied to the inside of a first web 121 and a second web 122 before lamination, but is silent as to whether printed ink patterns can be applied to the multi-ply web 128 after lamination.

Doubet discloses a similar method of producing a multi-ply web comprising gluing one web 46 in a colored glue pattern, corresponding to the pattern of protuberances of lamination roll 18, on the inside of the web 46, bringing web 46 in contact with another web 52 and laminating the two together. The web 46, where a glue pattern has been printed on the inner side, is also printed with ink patterns by two printing stations 12 and 14, while residing on an impression roll 16, after the web 46 has been laminated to web 52 (figure 1, abstract).

Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention to print an ink pattern on the outside of the second web 122 after lamination, because adding such a pattern would create a more decorative, eye-pleasing design on the product.

Regarding claim 5, Doubet discloses two patterns printed in register with each other in subsequent steps on the outside of web 46 (figure 1 and 2, abstract).

Regarding claim 6, Schulz '601, as modified, provides a colored glue printing station that prints a first pattern on the first web 121 before lamination and two colored ink printing stations that print a second and third pattern on the second web 122 after lamination (figure 3, column 7, lines 15-25, of Schulz '601; figures 1 and 2, abstract/specification of Doubet).

Regarding claim 9, Doubet discloses that the colored glue pattern and colored ink patterns are of different colors (abstract/specification).

Regarding claim 10, Doubet discloses that the colored printed patterns, glue and ink, are of different forms (figure 2, abstract/specification).

Regarding claim 11, Doubet discloses that the colored glue pattern and the colored ink patterns are different (figure 2, abstract/specification).

15. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Schulz '601, Nystrand, and Schulz '671 as applied to claim 7 above, and further in view of McNeil et al.

Regarding claim 8, Schulz '601, in view of Schulz '671, discloses a printed pattern on each of the first web 10 and the second web 1, but is silent as to whether these two patterns may be the same and printed on top of each other.

McNeil et al. discloses a similar method of producing a multi-ply web where an adhesive is printed onto each of two plies 12 in a predetermined pattern before lamination. The two applicator rolls 38 are in register with each other so that the patterns of both applicators 38 may be the same and printed on top of each other on the two webs 12 (figure 2, column 3, lines 60-61, column 4, lines 21-26).

Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention to have both patterned glue rolls 42 with the same pattern in register with each other, so that the patterns on the two webs 10 and 1 lie on top of each other, because doing so would create a product with a stronger bond and a cleaner, more simple design, depending on the characteristics desired.

16. Claims 14 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schulz '601, Nystrand, and Schulz '671 as applied to claim 1 above, and further in view of Murphy.



Regarding claim 14, the patterns of Schulz '601 may be of any configuration (column 7, lines 22-23), depending on the characteristics desired for the product. It would have been within perview of the skilled artisan to create a configuration so that the glue sites cover an area corresponding to between 0.03 and 9% of the total area, as evidenced by the teachings of Murphy (disclosing a printing pattern covering an area of 3% of the total area; column 4, lines 70-73).

Regarding claim 16, Schulz '601 discloses a first web 10 and a second web 1 being embossed before lamination (figure 3, column 6, line 52, thru column 7, line 11), but is silent as to whether the multi-ply web 15 can be embossed again after lamination.

Murphy discloses a similar method of producing a multi-ply web by printing a glue pattern onto a first web 5 and bringing the first web 5 in contact with a second web 6 into a press nip between rolls 11 and 12 for lamination figure 2, column 3, line 55, thru column 4, line 16). After lamination the web may be embossed between rolls 18 and 19 (column 4, lines 22-25).

Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention to emboss the web of Schulz '601 after lamination, because such a step would intensify the three-dimensional effect of the web and create a more eye-pleasing pattern.

### ***Conclusion***

17. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Robyn S. Heald** whose telephone number is **571-272-**

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**2362.** The examiner can normally be reached on Mon-Thur, 8:00-5:30; every other Fri, 8-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Blaine Copenheaver can be reached on 571-272-1156. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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